

**REMARKS**

Currently, claims 1 and 2 are pending. Claim 2 is newly-presented.

Claim 1 was rejected under 35 U.S.C. §102(b) as allegedly being anticipated by United States Patent No. 5,163,423 to Suzuki. Reconsideration and withdrawal of the rejection in view of the comments provided herein is requested.

Claim 1 recites a humidification apparatus including two temperature sensors, one at an outlet of a humidification chamber and another substantially at a patient end of a gas supply conduit. The invention as defined in claim 1 resides in displaying the lower of the two sensed temperatures. Claim 1 has specifically been amended to specify "a controller configured to receive input from said first and said second temperature sensors, to determine a lower temperature from said input which is the lower of the temperatures sensed by said first and second temperature sensors, and to output a signal to said display to cause said display to display said lower temperature to provide a clinician with an indication of the moisture content delivered."

The reason for displaying the lower of the two temperatures is clearly explained in the description on pages 13 and 14, in the section entitled "*User Output - Temperature Display*". Many clinicians equate the temperature of the humidified gas with the moisture content of the gas. However, gas may increase in temperature after leaving the humidification chamber, but the gas will not have any more moisture added to it. In these circumstances, the higher temperature of the gas at the patient end will give a clinician a misleading impression (too high) of the moisture content of the gas, as the gas will no longer be at 100% relative humidity. Accordingly,

it is beneficial to display the lower temperature sensed at the humidification chamber, where the gas was at 100% relative humidity, in these circumstances.

In the opposite scenario, where the temperature of the gas is lower at the patient end than at the humidification chamber, the amount of moisture delivered to the patient will be best indicated by the temperature at the patient end. This is because the gas at the patient end will still be 100% relative humidity, but will contain less water than the gas did when at a higher temperature in the humidification chamber, as a result of condensation. Therefore, the most useful temperature indication is not always from the same temperature sensor and in order to prevent clinicians over estimating the amount of moisture delivered to the patient, it is advantageous to display the lower of the two sensed temperatures.

Applicant submits that Suzuki discloses a humidification apparatus with two temperature sensors and a display. However, it is clear that the display of Suzuki is for displaying calculated values only, not sensed temperature. The calculated values may be absolute humidity, or relative humidity or temperature. The Examiner states that inherently the controller is able to display the temperature detected by sensors. Applicant submits that this is not the case. It is not disclosed or suggested in Suzuki that the temperature detected by either sensor can be displayed on the display.

Even if both sensed temperatures could be displayed in the apparatus of Suzuki, Suzuki does not disclose or suggest determining the lower temperature and displaying the lower temperature as specified by amended claim 1. There is nothing in Suzuki to suggest at doing this. The fact absolute humidity can be displayed in Suzuki, using humidity function key 14, means that displaying the lower sensed temperature is unnecessary. The clinician would use the

absolute humidity to determine the moisture delivered to the patient, not an estimate based upon a temperature reading.

Accordingly, Applicant submits that Suzuki does not anticipate, and does not render obvious, the subject matter of amended claim 1. Suzuki provides an alternative means of determining the moisture content of gases delivered to the patient and provides no motivation to use the lower of two sensed temperatures to provide a clinician with an indication of the moisture content delivered. Therefore, Applicant requests that the Examiner reconsider the rejection and withdraw same.

Claim 2 is newly-presented. Entry, consideration and allowance is requested. Claim 2 specifies "a controller configured to receive input from said first and said second temperature sensors and to output a signal to said display to cause a single temperature to be displayed to the user, said single temperature corresponding to the lower of the temperatures sensed by said first and second temperature sensors."

The Examiner states in paragraph 2 of the Office Action that "the calculated values [displayed in Suzuki] are derived from the sensed values and as such Suzuki displays the sensed temperature". Applicant disagrees with the Examiner's reasoning. Suzuki teaches displaying calculated values, not sensed temperature. The calculated values of Suzuki are not sensed temperature values, nor are the calculated values derived from sensed temperature. The calculated values in Suzuki are based on values input by the user and bear no relation to the sensed temperatures. It is the displayed values that are used to control the heating elements so that the sensed temperatures coincide with the parameters set by the user. However, there is

nothing relating to the sensed temperature that is displayed to the user, only information based on values input by the user. For example, column 4, lines 9-16 of Suzuki states that

. . . it is possible to calculate the relative humidity of air on the basis of a set temperature and a set absolute humidity and display the calculated relative humidity or to calculate the temperature of air on the basis of a set relative humidity and a set absolute humidity and display the calculated temperature. . .

It is clear that whatever is displayed is a calculated value based on input, set values.

Claim 2 clearly specifies that it is a *single* temperature that is displayed, that single temperature corresponding to the lower of the temperatures sensed by the first and second temperature sensors. Therefore, even if both sensed temperatures could be displayed in the apparatus of Suzuki, Suzuki does not disclose or suggest displaying such a single temperature as specified by claim 2. There is nothing in Suzuki to suggest at doing this. The fact absolute humidity can be displayed in Suzuki, using humidity function key 15, means that displaying the lower sensed temperature is unnecessary. The clinician would use the absolute humidity to determine the moisture delivered to the patient, not an estimate based upon a temperature reading.

In paragraph 6 of the Office Action, the Examiner notes that in Suzuki "inherently the controller is able to display the temperature detected by both sensors which would include a lower temperature if such temperature is sensed". Applicant again disagrees. There is no teaching or disclosure in Suzuki that the controller is able to cause display of any sensed temperature. As discussed above, it is only calculated values based on user input that is displayed. There is simply no mention of it being a possibility to display any sensed temperature in Suzuki. The Examiner refers to columns 3-4 (i.e. the whole description and claims) of Suzuki to support his assertion, but Applicant can find no support for his assertion anywhere in Suzuki.

If the Examiner is suggesting that the controller of Suzuki might be able to be configured to allow display of sensed temperatures, Applicant requests that the suggestion be withdrawn. There is no mention of it being a possibility in Suzuki, and claim 2 requires a controller that does cause the lower of the two sensed temperatures to be displayed, not a controller that might be configured to do so. Suzuki simply does not disclose the claimed invention as specified in claim 2.

Accordingly, Applicant submits that claim 2 defines both novel and inventive subject matter and entry and allowance is requested.

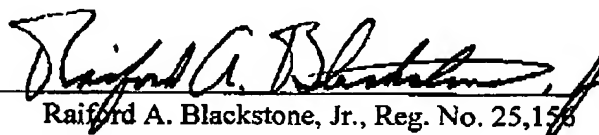
In view of the above Amendments and Remarks, Applicant respectfully submits that the claims of the application are allowable over the rejections of the Examiner. Should the Examiner have any questions regarding this Amendment, the Examiner is invited to contact one of the undersigned attorneys at (312) 704-1890.

Respectfully submitted,

Dated:

Jan. 17, 2006

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